Official [RECEIVED] [4-16-03] TL

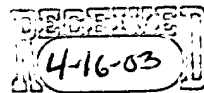## IN THE CLAIMS:

The following listing of the claims replaces all earlier listings and all earlier versions. Please amend claims 1, 3, 4, 7, 13, 15, 16, 18, and 19 as follows.

1. (Currently Amended) An image processing apparatus comprising:

a saturation calculation unit arranged to calculate saturation information of an image;

a saturation conversion characteristic generating unit arranged to generate a saturation conversion characteristic on the basis of conversion lines or curves corresponding to each conversion condition for a low-saturation side and a high-saturation side, where ~~said~~ the saturation conversion characteristic shows the relationship between input saturation information and output saturation information; and

a saturation conversion unit arranged to convert the saturation of the image on the basis of ~~said~~ the saturation conversion characteristic.

2. (Previously Cancelled)

3. (Currently Amended) The apparatus according to claim 1, further comprising a conversion condition setting unit arranged to set ~~said~~ each conversion condition for the low-saturation side and the high-saturation side by using ~~said~~ the input saturation information.

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4.   (Currently Amended) The apparatus according to claim 1, further

comprising an instruction unit arranged to make an instruction input by a user in order to

set ~~said~~ each conversion condition for the low-saturation side and the high-saturation side.

5, 6.   (Previously Cancelled)

7.   (Currently Amended) The apparatus according to claim 1,

wherein ~~said~~ the saturation conversion characteristic exhibits a ~~monatonous~~

monotonic increase or a ~~monatonous~~ monotonic decrease.

8-11.   (Previously Cancelled)

12.   (Previously Amended) The apparatus according to claim 1, further

comprising:

        a detection unit arranged to detect a color distribution of the image;

        a generation unit arranged to generate gradation correction

information of the image on the basis of the color distribution; and

        a gradation correction unit arranged to perform gradation correction

of the image on the basis of the gradation correction information.

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13.　　(Currently Amended) The apparatus according to claim 12, wherein said saturation conversion unit performs saturation conversion ~~for~~ on an image which has undergone gradation correction by said gradation correction unit.

14.　　(Previously Amended) The apparatus according to claim 12, wherein said generation unit comprises:

a highlight calculation unit arranged to calculate highlight area information of an image on the basis of the color distribution; and

a white balance calculation unit arranged to calculate white balance information on the basis of the highlight area information and a predetermined highlight value, and wherein

said gradation correction unit corrects gradation of the image on the basis of the white balance information and the highlight value.

15.　　(Currently Amended) The apparatus according to claim 12, wherein said generation unit comprises:

a shadow calculation unit arranged to calculate shadow area information of an image; and

a black balance calculation unit arranged to calculate black balance information on the basis of the shadow area information and a predetermined shadow value, ~~and~~ wherein said gradation correction unit corrects gradation of the image on the basis of the black balance information and the shadow value.

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16.   (Currently Amended) An image processing method comprising:

a saturation calculation step, of calculating saturation information of an image;

a saturation conversion characteristic generating step, of generating a saturation conversion characteristic on the basis of <u>conversion lines or curves</u> <u>corresponding to</u> each conversion condition for <u>a</u> low-saturation side and <u>a</u> high-saturation side, ~~where said~~ <u>the</u> saturation conversion characteristic shows the relationship between input saturation information and output saturation information; and

a saturation conversion step, of converting the saturation of the image on the basis of ~~said~~ <u>the</u> saturation conversion characteristic.

17.   (Previously Cancelled)

18.   (Currently Amended) The method according to claim 16, further comprising a conversion condition setting step, of setting ~~said~~ each conversion condition for <u>the</u> low-saturation side and <u>the</u> high-saturation side by using ~~said~~ <u>the input</u> saturation information.

19.   (Currently Amended) A recording medium comprising program codes of an image processing method at least comprising:

code for a saturation calculation step, of calculating saturation information of an image;

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code for a saturation conversion characteristic generating step, of generating a saturation conversion characteristic on the basis of <u>conversion lines or curves corresponding to</u> each conversion condition for <u>the</u> low-saturation side and <u>the</u> high-saturation side, where said saturation conversion characteristic shows the relationship between input saturation information and output saturation information; and

code for a saturation conversion step, of converting the saturation of the image on the basis of ~~said~~ <u>the</u> saturation conversion characteristic.